

Final Project Report to the NYS IPM Program, Agricultural IPM 2000 – 2001

Title:

Integrated Pest and Crop Management TAg Teams in NWN

Project Leader(s):

Nathan R. Herendeen, Area Field Crops Specialist, NWN DL & FC Team

Michael J. Stanyard, Area Field Crops Specialist, NWN DL & FC Team

Cooperator(s):

Judson Reid, Ag/4H Program Leader, Yates County CCE

Mike Berkal, Ag/Natural Resources Program Leader, Seneca County CCE

Nancy Glazier, Assistant, NWN DL & FC Team

Chad Engert, Summer Assistant, NWN DL & FC Team

Type of grant:

Training practitioners to use IPM techniques

Project location(s):

Yates County, Penn Yan

Seneca County, Interlaken

Abstract:

Tactical Agriculture Teams (TAg) have proven effective for teaching farmers and agri-business representative the principles of integrated pest management (IPM) as well as nutrient management and improved crop cultural practices. Two teams were effectively developed last season within the Mennonite community of farmers in Yates County. Because of the limited travel abilities of Mennonite growers, many growers outside of these TAg areas approached us about establishing teams closer to their proximity. Our efforts this year were aimed at expanding TAg Teams in that venue as well as across the NWN area. In 2001, two additional Mennonite Teams were established in Yates County. One additional TAg Team was established in Seneca County.

Background and justification:

The use of TAg Teams as an IPM outreach method declined with the loss of the western NY IPM coordinator and the loss of the second crops specialist on the NWN Team. That crop specialist position was refilled and TAg Teams started in 2000. We operated without any technician support, but were quite successful with the Mennonite groups. At the completion of these two programs, many individuals approached us about establishing local TAg Teams in their area.

TAg Teams provide growers with a learning environment within a small group of growers who are usually their neighbors. Meetings are normally close to their farm and therefore, they do not spend much time traveling to the meeting. In the case of Mennonite or Amish communities, distance to travel to a meeting is crucial in their decision to attend. Therefore, there is a built in comfort level and growers can feel less intimidated about new concepts and asking questions if they do not understand.

We believe we can be much more effective and reach more farmers with financial support for a summer assistant. The assistant can do much of the logistical work to initiate teams, schedule meetings, develop written reference materials for participants, obtain scouting data and assist with pre and post testing for evaluation. The help of summer assistant would be paramount in increasing the number of TAg teams in WNY and therefore reaching more of our agricultural clientele.

Objectives:

- 1.) Establish five TAg Teams in the NWNY area for this season.
- 2.) Provide two soil tests and one Pre Side dress Nitrogen Test (PSNT) for each cooperating farm. Encourage them to do soil tests on other fields and PSNT on cornfields.
- 3.) Develop timely pest management notes and distribute to participants for inclusion in a reference notebook.
- 4.) Expand the use of scouting data so information gained is placed on the NWNY Team website and used in "Nate's Notes" and "Mike's Pest Update
- 5.) Assist any participants with computers to develop their skills for using the computer to access the NWNY Team web page (and other sources of IPM information).
- 6.) Improve the evaluation tests that have been used in the past to test impact in 2001 and program adoption in 2002. Complete a follow-up evaluation by phone after the sessions.

Procedures:

Each TAg Team was made up of six farmers, one local agri-business representative, plus the county extension agricultural program leader. Five TAg teams were originally proposed. However, after establishing three teams of eight participants each, the workload and time constraints prevented adding additional teams.

Meetings began in early April to discuss local soil types, pH testing, soil sampling, interpreting lab results, fertilizer applications, PSNT's and alfalfa stand evaluation. Subsequent meetings were scheduled approximately every three weeks with each participant hosting a TAg meeting at their farm. Many growers were reluctant to host a meeting, but realized all the benefits gained from ideas and suggestions entertained from other growers. All farms were viewed as open classrooms and pest management and crop cultural practices were viewed and discussed in the field.

Throughout the growing season, TAg teams learned how to assess pest populations and their potential for crop damage, including insects, weeds and diseases. Most of the participants were dairy producers and therefore, crop pest education consisted of alfalfa and grain and silage corn. In the Seneca County Team, wheat and soybeans pest management topics were also covered for some field crop producers. Insect pest management education included alfalfa weevil, potato leaf hopper in alfalfa, wireworm, seed corn maggot, white grub, armyworm, black cutworm, corn borer, and corn rootworm.

Insect fact sheets on most of our feature pests were handed out to growers to keep for future record. The past TAg Team coordinator developed most of these references, and a few changes were updated (ie. chemical controls). Participants were also given copies of the 2001 Cornell Guide to Integrated Crop Management and Alfalfa and Field Corn Management Pocket guides as references.

Each farmer picked one cornfield and one alfalfa field that we scouted once a week throughout the summer. Nancy Glazier, Team assistant, scouted fields from each of the twelve farms in Yates County. Chad Engert, our summer assistant, scouted the six farms in Seneca County. If problems such as weeds, diseases or insects were found to be over thresholds, growers were contacted and we worked with them on a one-on-one basis. Summer assistants gave scouting reports from all farms at TAg meetings to give growers an idea of pest populations in the surrounding area.

These TAg Team scouting reports were also placed on our NWNy Team web page (www.cce.cornell.edu/programs/nw-ny-dairy-fieldcrops/) on a weekly basis. Nancy and Chad each had their own section to post results from each county. Nate Herendeen and Mike Stanyard also used these scouting reports in greater detail on “Nate’s Notes” and “Mike’s Pest Update”.

Results and discussion:

Overall, the TAg program went very smoothly and we had some great participants who were eager to learn. All original grower participants but one remained with their groups throughout the season. That one was replaced by his brother the following meeting. Logistics was sometimes a problem, particularly with the Mennonite groups. However, in most cases we were able to get them picked up and to the meeting on time.

We had a tougher time keeping in contact with our agri-business members of the group. They had too many other commitments with their jobs during the daytime, and could not make the commitment to their teams. We will continue to work to keep them involved in the future.

Pre and post-tests were given at the first and last meetings of the year to measure any impact our TAg program may have had on the knowledge base of our team members. Only our Yates County teams had complete pre and post-test results. Collectively these members increased their general knowledge of integrated crop and pest management by 27%. Test averages increased from 52 to 79% with a high score of 93%.

One of our original goals was to promote the use of the information on our website as well as promote the web's use as an agricultural reference. Only six non-Cornell participants in our three teams had a computer that they worked on regularly. Three of these were our agri-business reps and the other three were from the Seneca County group. No one else had an interest to own or learn more about computers. The six that did were given the Team website and some other agricultural news and academic update sites. Two reported back that they read "Nate's Notes" and "Mike's Pest Update" regularly.

The scouting program by our team assistants was very valuable to growers, the NWNYS Team, the County, and anyone who read our weekly reports on our web site. Additionally, Nate Herendeen posted pertinent pest and crop findings on the fieldcrops list server that is read by many Cornell employees and agribusiness personnel throughout the state.

This service also provided significant buy-in by the growers to become part of the TAg Team. This was a very attractive service to them since most of these farms did not scout for insects such as potato leafhopper or western corn rootworm. Many of the growers told me they looked forward to seeing the scouts each week and were anxious to see the scouting results. If there was a field that was close to or over threshold, the grower was personally contacted that day and a management decision was made on the spot.

Many new alfalfa seedings were scouted for PLH and found to be over threshold this summer, while many established fields were not. Through our scouting program many of our participants were able to spray these new seedings before economic damage occurred. The NWNYS Team could not have offered this valuable service without the employment of these summer assistants.

This scouting information was also valuable to the county agricultural program leaders. County extension was able to publish pertinent IPM articles in the local papers and newsletters based on what pests were found to be increasing by our scouts.

From our first meeting of the year, there was an important focus on the topic of soils. Nate Herendeen covered most of the basics on soil chemistry and physics but more specifically about the particular soils being farmed in that immediate area. Some growers brought copies of the soil test results for more clarification on how to read them and determine how much fertilizer they needed, or did not need.

The importance of this topic carried on into the season when we discussed Pre Sidedress Nitrogen tests or PSNT. The importance of this test was demonstrated with some of our field crop participants that were prepared to sidedress Nitrogen on corn. The PSNT test showed adequate levels of Nitrogen so additional sidedressing was not warranted. The grower estimated he saved over a thousand dollars in fertilizer costs by not applying unneeded nitrogen to his crop.

At the final TAg meeting Nate Herendeen was asked to speak again on the topic of "Soil Health". Participants had many good questions ranging from earthworms to alternate liming materials. Because there was such an interest in soils, we purchased each of them a copy of Building Soils for Better Crops to keep them reading through the winter and prepare for next year.

